

Headquarters U.S. Air Force

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POPULATION HEALTH IMPROVEMENT IN THE MHS



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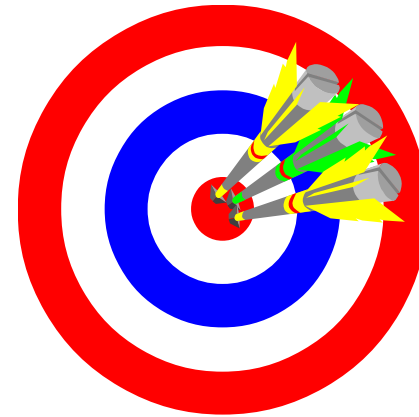
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Introduction

Population health improvement requires planning and guidance, and an effective population health measurement program that bridges strategy-to-tasks





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MHS Optimization and Population Health Improvement

Where we started...

FOCUS ON DISEASE

Sub-optimal satisfaction

Enrollment

Appointment system

Claims processing

Sub optimal points of access

Advice/Triage/E.R.

Highly episodic utilization

Many unplanned visits

Lack of continuity

Decreased "health status"

Where we are going...

FOCUS ON HEALTH

Increase appropriate access

Improve population health

Enroll & assess needs

Primary disease/injury prevention

Demand management

Referral management

Case management

Clinical practice guidelines

Ensure continuity of care

Increase satisfaction & loyalty

SHIFT FOCUS FROM INTERVENTION TO PREVENTION

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We Can Improve Health!

Deliberately & Measurably

“It is a distortion, with something profoundly disloyal about it, to picture the human being as a teetering, fallible contraption, always needing, watching and patching, always on the verge of flapping to pieces.”

Lewis Thomas, *The Lives of a Cell*,



Wellness



Illness

Health Continuum



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MHS Framework for Population Health Improvement

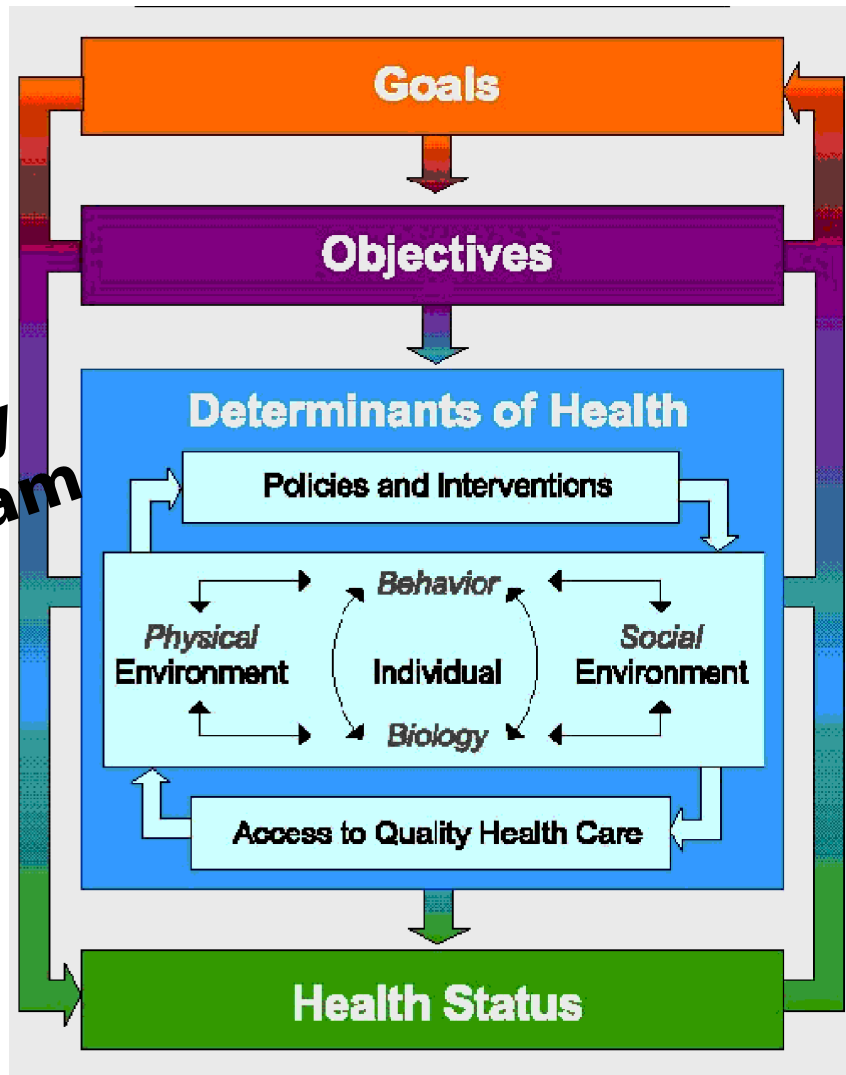
- **Systematic approach to community health**
 - **Align plans/programs with MHS Mission, Vision, Goals**
 - **Measurable improvement in health status**
- **A unique combination of military-specific, public health and health plan functions**
- **Build population health capacity and support structure/processes**
- **Fundamental shift: organizing health information around individuals and populations rather than around providers and healthcare systems**



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Systematic Approach to Health Improvement

**Deliberately
plan/program**



Measure

Healthy People 2010



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Goal: Increase Quality and Years of Healthy Life

“If I had known I was going to live this long, I would have taken better care of myself.”



Anonymous



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Population Health Improvement Principles

- **Define populations targeted by interventions**
- **Use applied epidemiology**
- **Use evidence-based interventions**
- **Manage information to support health assessment, planning, and performance improvement**
...MEASURE HEALTH!



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Define Populations

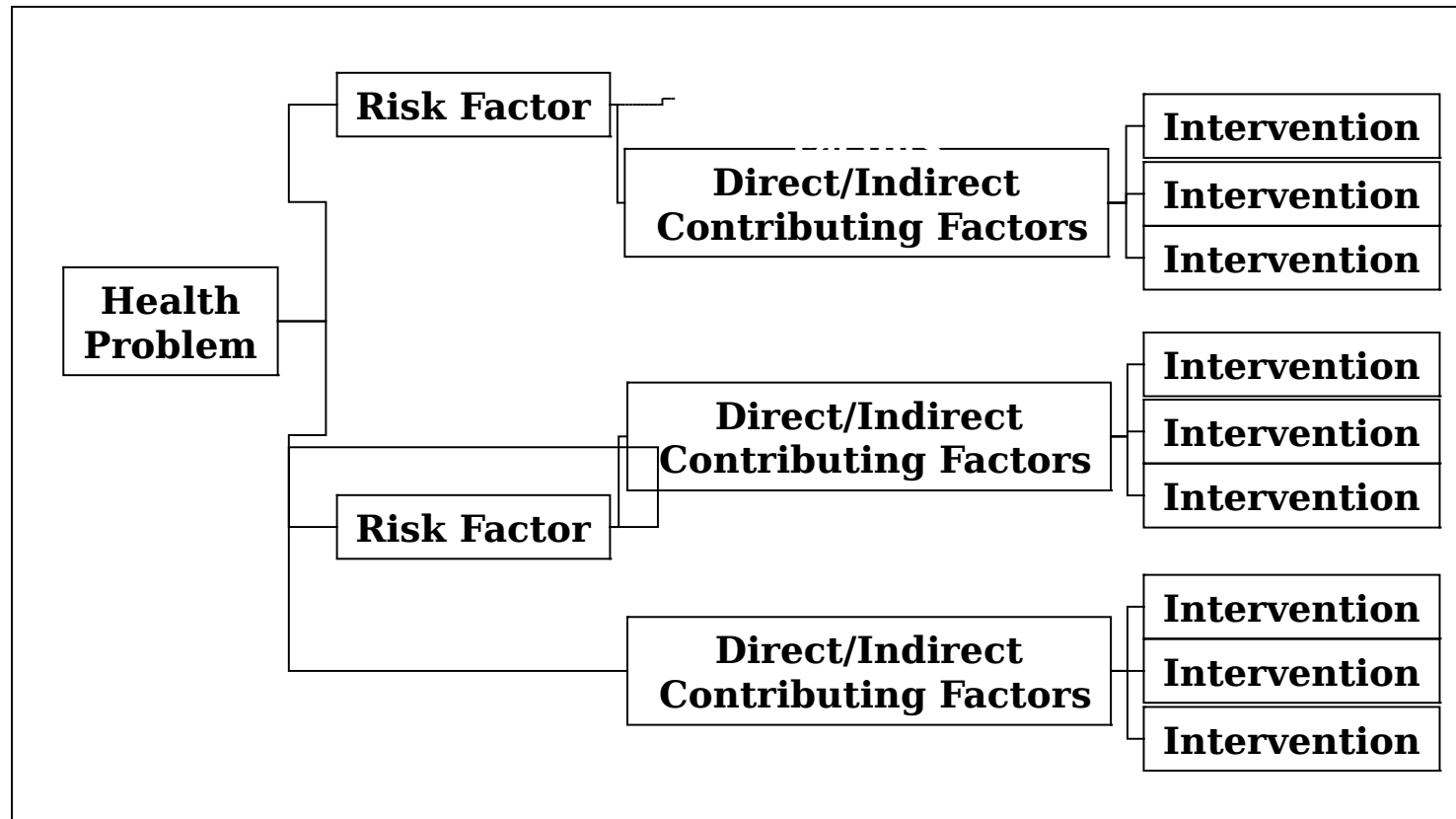
- **Essential to define populations to target interventions**
 - **Active Duty, Guard, Reserve**
 - **TRICARE Prime enrollees**
 - **Base/Post community**

- **Populations are linked to accountable programs--e.g., PCMs, clinics, MTFs, military unit**



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Applied Epidemiology for Improving Population Health





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Evidence-Based Interventions

- **Effective health services--doing the right thing**
 - **Clinical preventive/community preventive services**
 - **Clinical guidelines**
 - **Condition/disease management**

- **Efficient health services--doing things right**
 - **Case management**
 - **Business case analysis**
 - **Cost-effectiveness studies**



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Managing Information: Linking Strategy to Tasks

- **Establish enterprise objectives for priority health problems**
 - **Cascade MHS and Service priorities to local level**
 - **Regional and local objectives support enterprise**
- **Plan and program resources accordingly**
- **Align health measures to objectives**
- **Measure**
 - **Roll local measures up to aggregate enterprise**
 - **Analyze, interpret, disseminate to all levels**
- **Periodically reassess priorities and realign as needed**



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Measuring Health

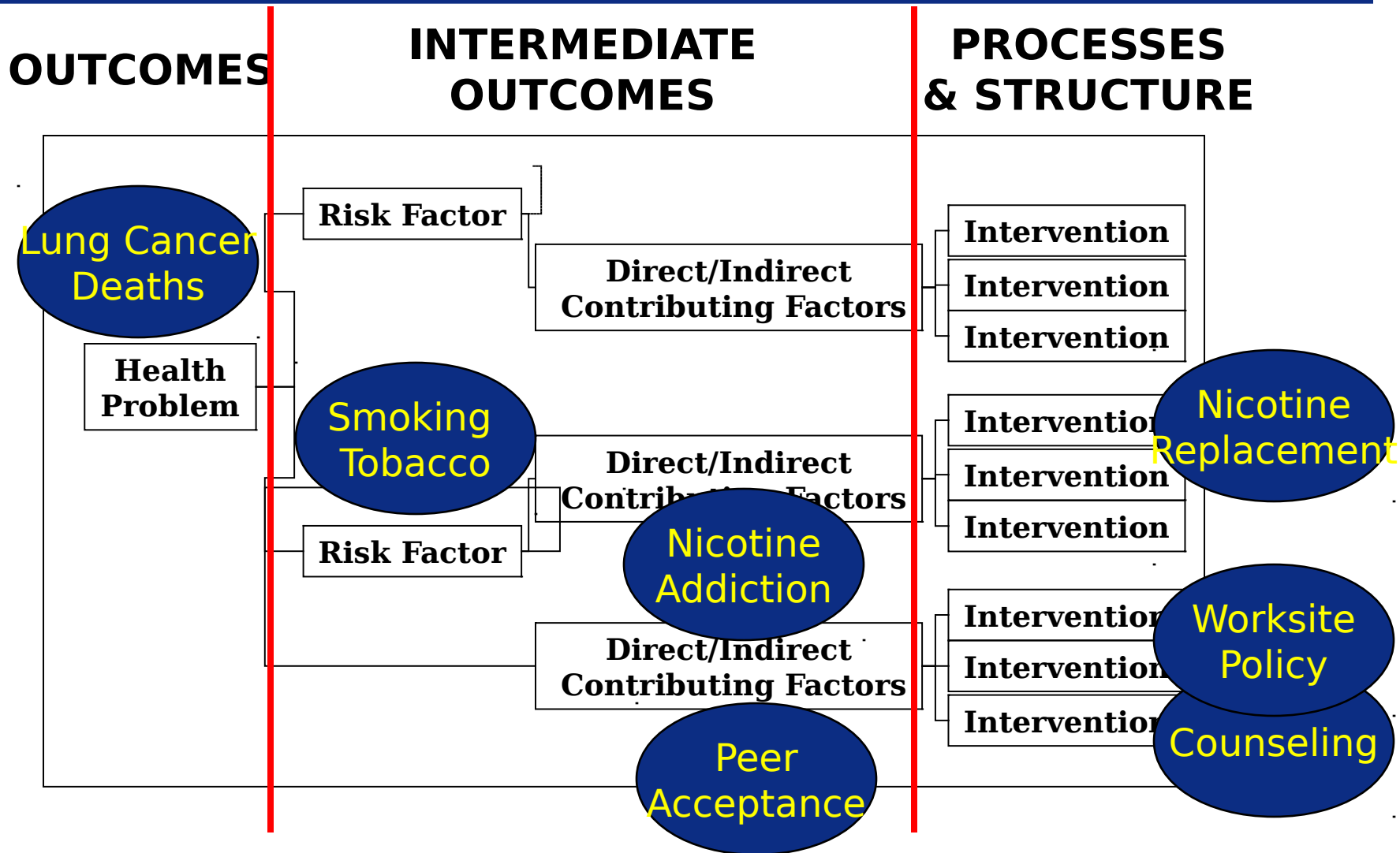
- **An effective population health measurement strategy is essential for achieving population health improvement**

- **Success factors for population health measurement:**
 - **Portfolio of measures that reflect priorities and are actionionable**
 - **Systematic utilization of measures to monitor and improve performance across system**



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Health Outcomes, Processes and Structure





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Types and Examples of Population Health Measures

Type	Area of Measures	Specific Examples
Health Outcomes	QALYs/DALYs	QOL/Disability surveys
	Mortality	Crude death rates
	Morbidity—prevalence & incidence	Disease/injury-specific death rates
		Disease/injury-specific rates
	Risk factors—prevalence & incidence	Hospitalization rates for specific diseases/injuries
Processes of Care	Clinical Preventive Services	Risk factor specific rates
	Disease/condition mgmt	Rate of provision of 1 ⁰ and 2 ⁰ prevention services
	Acute care	Rates of provision of guideline-driven services
Structure	Access capacity	Rates of provision of acute care services
	Provider capacity	Proportion of individual needs met
	Burden of illness	Ratio of providers to population
	Defined Population	Health assessment of population
		Number of enrollees
		Completeness of demographics



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Portfolio of Measures: Criteria

■ Must haves

- Align with strategic objectives...priority health problems**
- Relevant to specific population(s)**
- Link proven interventions to outcomes of interest**
- Actionable at “deck plate”**
- Reasonable: show change within 1-2 yrs**
- Standardized and scalable**
- Can measure periodically for trends, performance feedback**

■ *Nice to haves*

- Comparable to *non-DoD* systems (HEDIS® vs. HEDIS®-like)**
- Automated**
- No redundancy**



Portfolio of Measures

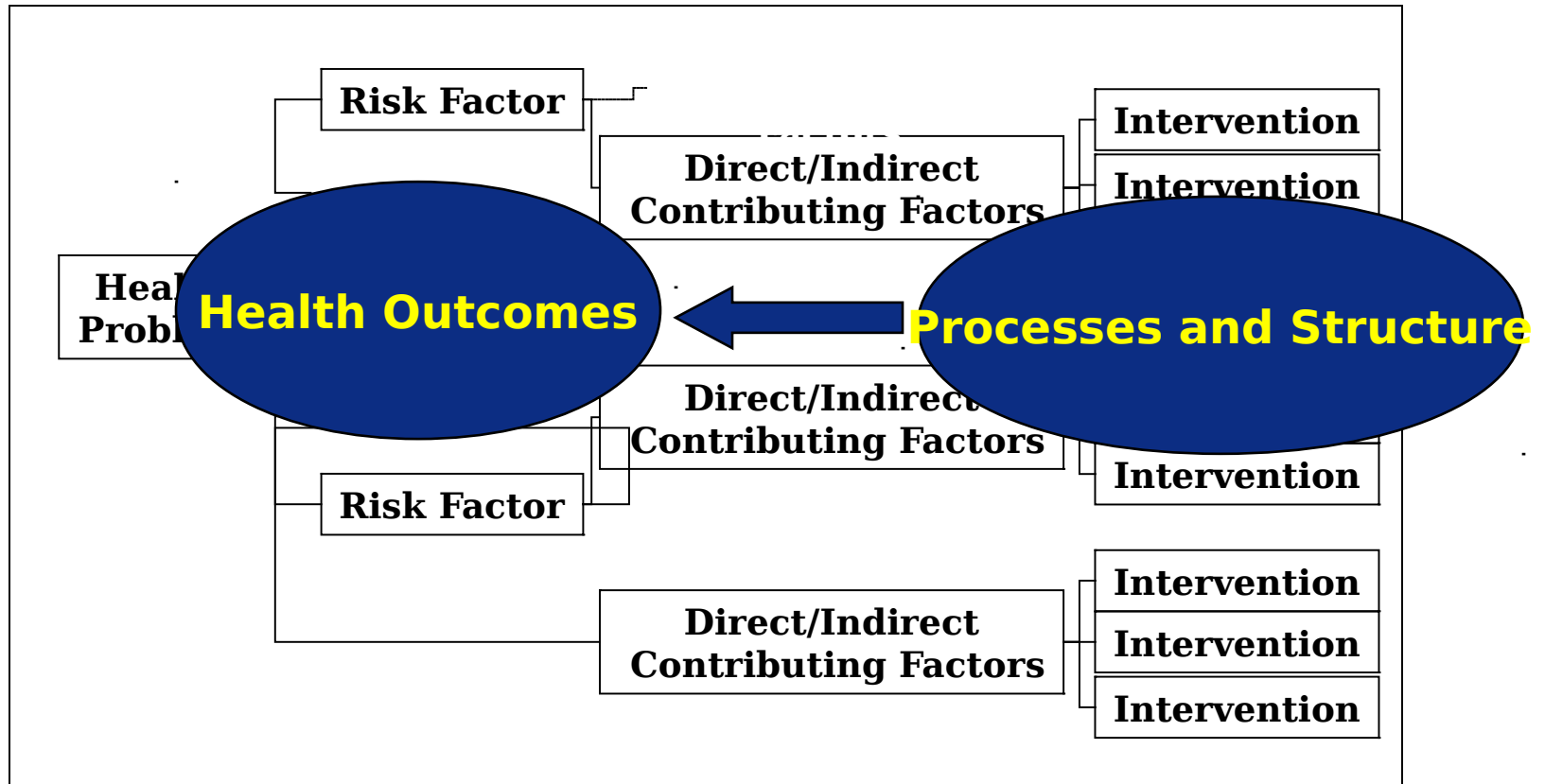
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- **Use only a select few outcome measures**
 - **Very important to look at health-related behavior/risk factors**
 - **Chronic disease morbidity & mortality may be too difficult**
--take larger populations and long time to see change
- **Process measures are key**
 - **Must be known to improve outcomes!**
...hence emphasis on USPSTF & HEDIS®
 - **Coverage for preventive services**
 - **Condition management e.g., diabetes, acute MI, asthma**
- **Structure measures are useful for basic capacity management**
e.g., enrollment ratios, number of exam rooms, support staff
- **Requires use of surveys, automated data, special studies**



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Link Structure and Processes to Outcomes

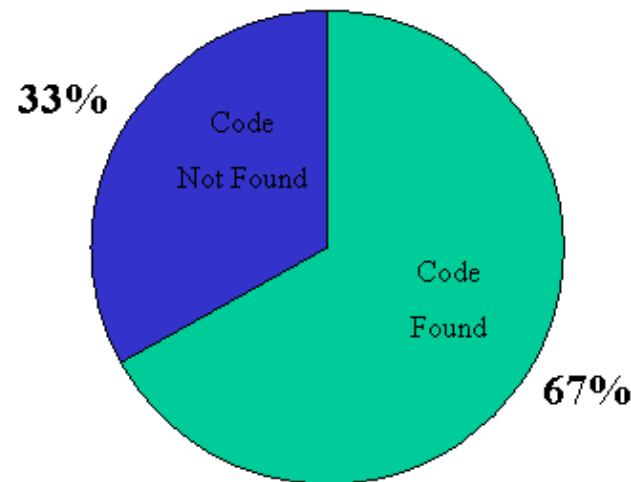




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Process Measure: Example

Percentage of Women Enrolled to MTF XYZ with Prenatal Care Visits in the 1st Trimester



All CPT and ICD-9 codes for prenatal care visits on or between 176- 280 days prior to delivery were searched for in Air Force MTFs (ADS), MTFs of sister services (Ft Detrick Server), and the purchased care sector (CHAMPUS Claims Database).

Total Enrolled Women
Delivering Live Births: 201



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Status of MHS Population Health Measures

- **Many measures developed among Services, TMA**
- **Some measures available enterprise-wide**
 - **Most are outcome measures**
 - **Many measures are captured with inconsistent periodicity and changing methodologies**
 - **Most process measures are in development**
- **Population health measures are not systematically analyzed and disseminated throughout MHS**



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Status of MHS Outcome Measures

CURRENT OUTCOME MEASURES (see legend)						
Measure	MHS Programs				Service Programs	
	MHS level		MTF level			
Health status—SF 8	TOPS	HEAR	HEAR			
Med-related lost duty days					AF	
AD mortality rate	DoD Death File					
AD Suicide rate	DoD Death File				AF	
Infant mortality rate	PerfCon					
Dental health: % AD class 1 or 2	PerfCon	PHOTO	PHOTO		USA / USN / AF	
AD disqualified—% temp profile	PerfCon					
Unintentional injury rate	PerfCon					
Preventable admission rate	PerfCon /TOPS	PHOTO	TOPS	PHOTO		
Asthma hospitalization rate	PerfCon					
Teenage pregnancy rate	PerfCon					
Low birth weight rate	PerfCon					
Specific chronic disease rates	HEAR		HEAR		USN	AF
AD immunization status	DMSS	PHOTO	PHOTO		USA / USN	AF
AD fitness rates	HEAR		HEAR		AF	
Smoking rates	PerfCon	HEAR	HEAR			
Alcohol use	HEAR		HEAR			
Safety practices	HEAR		HEAR			
Diet	HEAR		HEAR			
High-risk sexual behavior	HEAR		HEAR			

Available

Not Analyzed +/- Sporadic use

In-development

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Status of MSH Process Measures

CURRENT PROCESS MEASURES (see legend)

Measure	MHS Programs				Service Programs		
	MHS level		MTF level				
Screening mammography rate	Perf Con	HEAR	PHOTO	PHOTO	HEAR	USN	AF
Cervical cytology screening rate	Perf Con	HEAR	PHOTO	PHOTO	HEAR	USN	AF
Childhood immunization rate	PerfCon					AF	
Cholesterol screening rate	PerfCon		HEAR	HEAR		USN	AF
Dental exam rate	PerfCon		HEAR	HEAR			
Colorectal cancer screening rate	HEAR			HEAR		AF	
% diabetics with Hgb A1C test	PHOTO?			PHOTO?		USN	AF
% asthmatics with prev med RX	PHOTO			PHOTO		AF	
% diabetic retinal screening	PHOTO			PHOTO		AF	
Follow-up post hosp for mental ill	PHOTO			PHOTO			
First trimester OB visit	PHOTO			PHOTO		AF	
B-blocker therapy after acute MI	PHOTO			PHOTO		USA	
Follow-up post delivery	PHOTO			PHOTO			
ED visits per 1000	TOC		PHOTO	TOC	PHOTO		
Discharges per 1000	TOPS		PHOTO	TOPS	PHOTO		
Meet access to care standards	PerfCon /TOPS		PHOTO	TOPS	PHOTO	USA / AF	
Continuity of care	TOC			TOC			

Available

**Not Analyzed +/-
Sporadic use**

In-development

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Status of MHS Structure Measures

CURRENT STRUCTURE MEASURES (see legend)

Measure	MHS Programs				Service Programs	
	MHS level		MTF level			
Enrollment rate	TOC	MHSES /PerfCo	TOC	MHSES /PerfCo	USN	AF
Enrollees per PCM			CHCS Report		AF	
Know patients (PCMBN)	TOC		TOC	CHCS	AF	
Health assess completion rate	HEAR		HEAR		AF	
PCM visit rate	HEAR		HEAR			

Available

**Not Analyzed +/-
Sporadic use**

In-development

Legend: Current Measures includes measures developed and systematically disseminated (available), measures collected but not routinely analyzed/disseminated or used sporadically, and measures in-development. MHS Programs refers to measures collected MHS-wide and stratified to MHS or MTF level. Service Programs refers to measures implemented by individual Services that are stratified to MTF level or lower.

TOPS: TRICARE Operations Performance Statement. **HEAR:** Health Evaluation Assessment Review. **PerfCo:** Performance contract program. **PHOTO:** Population Health Operational Tracking and Optimization. **TOC:** TRICARE Operations Center. **DMSS:** Defense Medical Surveillance System.



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Recommendations

- **Periodically publish comprehensive report on health of military populations**
 - **Model after Health of United States**
 - **Combination of morbidity, mortality, risk factor data**
 - **Basis for prioritizing health problems**
- **Establish portfolio of actionable measures**
 - **Use firm criteria**
 - **Emphasize risk factor and process measures**
 - **Balance portfolio based what is needed...try not to default to what we have or what is easy**
 - **Regularly collect, analyze, disseminate to all levels**
- **Implement regular leadership review--MHS, Services, Regions**



Summary

- **Population health improvement requires a systematic approach**
- **Measuring health status and system performance are difficult but essential for improving health and optimizing care**
- **DoD has extensive portfolio of health measures but needs to systematically develop, organize and utilize measures**



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“Life should begin with age and its privileges and accumulations, and end with youth and its capacity to splendidly enjoy such advantages.”

Mark Twain, 1901 (1835-1910)

